This article was published in the Scientific and Practical Electronic Journal "Alley of Science" №14, Volume 1, in 2017 in Russian.
This article has been translated into English by its author Shchemelinin K. S.
The original article on Russian can be read at:
http://www.schemelinin.com/KS-gold-2017.pdf
https://www.elibrary.ru/item.asp?id=30574672

Konstantin Sergeyevich Shchemelinin (rus: Константин Сергеевич Щемелинин)
ORCID:0000-0002-3636-1583

GOLD AS A BASIS FOR ECONOMIC CALCULATION

Annotation

1) Determined the TOP 50 highest-grossing films in the entire history of the United States.

2) Calculated in 2014 prices for the following items: Tom Sawyer's treasure, the construction of the Vorontsov Palace in Alupka, and the construction of the Taj Mahal, plus Seneca's fortune and the income of King Darius I of Persia..

3) Shows how US dollar inflation reduces the wealth of billionaires.

4) Economic results of the collapse of the USSR are given for all former Soviet republics (Russia, Kazakhstan, Belarus, Azerbaijan, Armenia, Turkmenistan, Lithuania, Estonia, Ukraine, Georgia, Kyrgyzstan, Moldova, Tajikistan, Latvia, Uzbekistan).

5) Describes the change in GDP from 1970 to 2013 in such countries as the USA, Germany, Great Britain, China, Greece, Japan, Iraq, India, Brazil, Egypt, South Africa, Angola, Poland, Romania, Spain, Sweden.

6) The cost prices of the USA, Russia and Ukraine are calculated.

7) The profitability of a successful war of conquest is calculated.

Keywords

Gold, silver, GDP, US dollar, inflation, billionaire, state, collapse of the USSR, war

Research objectives

1) Show that the basis for economic calculations covering a period of more than 5 years is gold.

2) Show that people who lived in ancient times (including BC), managed comparable amounts of money with modern people.

The main part

Table of contents

d) The cost of building the Taj Mahal
e) The state of Seneca
f) Prices in Ancient Greece
g) Darius I's income

§3. US Dollar inflation and deflation

4. Changes in the fortunes of some of the richest people
a) Foreign billionaires
b) Russian billionaires
c) Ukrainian billionaires

5. Analysis of GDP and GDP per capita for different countries

6. Economic results of the collapse of the USSR for the former Soviet Republics

§7. Economic outcomes of EU membership for some countries

§8. Relative wealth

9. Approximate examples of calculating the cost of States and the benefits of a war of conquest

§1. Highest-grossing film

Data for US movies is taken from the Box Office Mojo website [17], and the gold exchange rate is taken from Kitco data[18].

TOP 50

Table 1. TOP 50 American films by box office in the United States from 1915 to 2014 in gold equivalent

№	Year	Movie Title (in English)	Movie title (in Russian)	US box office in the year of release of the film, USD million	Price of one troy ounce of gold in the year of release of the film, USD	US box office in the year of release of the film, tons of gold	Possible box office receipts of the film, if it was released in 2014 (1266.4 USD per troy ounce of gold), in USD million
1	1939	Gone with the Wind	Унесенные ветром	198.7	34.4	179.6	7314.1

2	1937	Snow White and the Seven Dwarfs	Белоснежка и семь гномов	184.9	34.8	165.3	6729.6
3	1965	The Sound of Music	Звуки музыки	158.7	35.1	140.6	5724.8
4	1961	101 Dalmatians	Сто один далматинец	144.9	35.3	127.6	5197.6
5	1967	The Jungle	Книга джунглей	Book 141.8	35.0	126.0	5132.3
6	1965	Doctor Zhivago	Доктор Живаго	111.7	35.1	99.0	4030.9
7	1977	Star Wars: Episode IV: A New Hope	Звёздные войны. Эпизод IV: Новая надежда	461,0	147,7	of 97.1	3952,7
8	1942	Bambi	Бэмби	102,2	33,9	93,8	3819,6
9	1967	The Graduate	Выпускник	104,9	35,0	93,3	3797,2
10	1970	Love Story,	История любви	106,4	of 35.9	92,2	3753,2
11	1964	Mary Poppins	Мэрри Поппинс	102,3	35,1	90,6	3690,0
12	1970	Airport	Аэропорт	100,5	36,0	up 86.8	3535,0
13	1955	Lady and the Tramp	Леди и Бродяга	93,6	35,0	83,2	3386,8
14	1953	Peter Pan	Питер Пен	of 87.4	34,8	78,1	3180,7
15	1969	Butch Cassidy and the Sundance Kid	Бутч Кэссиди и Санденс Кид	102,3	41,1	77,4	3152,4
16	1940	Pinocchio	Пиноккио	84,3	33,9	77,3	3147,5
17	1973	The Exorcist	Изгоняющий дьявола	232,9	97,3	74,4	3031,4
18	1972	The Godfather	Крёстный отец	of 135.0	58,2	72,1	2936,8
19	1970	M. A. S. H.	Военно-полевой госпиталь	81,6	of 35.9	70,7	2878,5
20	1941	Fantasia	Фантазия	76,4	33,9	70,1	2854,4
21	1959	Ben-Hur	Бен-Гур	74,0	35,1	65,6	2669,9
22	1964	My Fair Lady	Моя	72,0	35,1	63,8	2597,7

			прекрасная леди				
23	1997	Titanic	Титаник	of 658.7	331,0	61,9	2520,1
24	1956	The Ten Commandments	Десять заповедей	of 65.5	35,0	58,2	2370,0
25	1965	Thunderball	Шаровая молния	63,6	35,1	56,3	2294,5
26	1970	Patton	Паттон	61,7	of 35.9	53,5	2178,3
27	1999	Star Wars: Episode I - The Phantom Menace	Звёздные войны. Эпизод I: Скрытая угроза	474,5	278,9	52,9	2154,8
28	1963	Cleopatra	Клеопатра	57,8	35,1	51,2	2084,6
29	1967	Guess Who's Coming to Dinner	Угадай, кто придет к обеду	56,7	35,0	50,4	2050,4
30	1975	Jaws	Челюсти	260,0	161,0	50,2	2045,1
31	1973	The Sting	Афера	156,0	97,3	49,9	2030,4
32	1968	2001: A Space Odyssey	Космическая одиссея 2001 года	57,0	38,7	45,8	1863,8
33	1959	Sleeping Beauty	Спящая красавица	51,6	35,1	45,7	1861,7
34	1964	Goldfinger	Голдфингер	51,1	of 35.1	45.3 per	1843,0
35	1972	The Poseidon Adventure	Приключения "Посейдона"	84,6	58,2	45,2	1840,0
36	1968	Funny Girl	Смешная девчонка	52,2	38,7	42,0	1708,9
37	1963	It's a Mad, Mad, Mad, Mad World	Этот безумный, безумный, безумный, безумный мир	46,3	35,1	41,1	1671,7
38	2002	Spider-Man	Человек-паук	403,7	309,7	40,5	1650,8
39	1962	Lawrence of Arabia	Лоуренс Аравийский	44,8	35,2	39,6	1612,7
40	1961	West Side Story	Вестсайдская	43,7	of	38.5	1566,2

			история		35.3	cm	
41	1956	Around the World in 80 Days	Вокруг света за 80 дней	42,0	35,0	37,3	1519,7
42	1973	American Graffiti	Американские граффити	115,0	97,3	36,8	1496,8
43	2001	Harry Potter and the Sorcerer s Stone	Гарри Поттер и философский камень	317,6	271,0	36,4	1484,1
44	2001	The Lord of The Rings: The Fellowship of the Ring	Властелин колец: Братство кольца	of 315.5	271,0	36,2	1474,6
45	1982	E. T.: The Extra-Terrestrial	Инопланетянин	435,1	375,7	36,0	1466,7
46	1960	Swiss Family Robinson	Швейцарская семья Робинзонов	40.4	35.3	35.6	1447.8
47	1972	What's Up, Doc?	В чем дело, док?	66,0	58,2	35,3	1436,1
48	1993	Jurassic	Парк юрского периода	Park 402,5	360,0	34,8	1415,7
49	2002	The Lord of the Rings: The Two Towers	Властелин колец: Две крепости	342,6	309,7	34,4	1400,7
50	1994	The Lion	Король Лев	King 422,8	384,0	34,2	1394,3

Conclusions from Table 1:

By TOP 10:

1) All films were released from 1939 to 1977
2) 6 films released from 1961 to 1970

By TOP 20:

1) All films were released from 1939 to 1977
2) 2 films released before 1941
3) 3 films released from 1940 to 1950
4) 2 films released from 1951 to 1960
5) 9 films released from 1961 to 1970
6) 3 films with released from 1971 to 1977

By TOP 50:

1) 19 films released from 1961 to 1970

2) 8 films released from 1971 to 1980

3) 4 films released from 1991 to 2000

4) Films from 2003 are not in the TOP 50

General conclusion from table 1: the period from 1961 to 1970 is the time of the largest box office receipts for American cinema

This may be due to at least two factors:

1) World War II ended more than 20 years ago

2) Color television is not yet widely available

Highest-grossing movie

According to the Box Office Mojo website, [17] the highest-grossing US film, excluding inflation, is Avatar, which was released in December 2009 and brought its creators only about 2.78 billion USD in 2009-2010. "Gone with the Wind", identified in Table 1 as the highest-grossing US film in the United States, grossed $ 189.5 million worldwide between 1939 and 1940.

Table 2. Global revenue from "Gone with the Wind" and "Avatar"films

Title of the film and year of release	Year	of release Worldwide fees from rental, USD	Gold rate for the year of rental, USD per ounce	Worldwide fees from rental, tons of gold	Possible box office receipts of the film, if it was released in 2014 (1266.4 USD per troy ounce of gold), in millions of USD
Gone with the Wind (1939)	1940	189.5 million	33.85	174.1	7.09 billion USD
Avatar (2009)	2010	2.78 billion	1224.53	70.6	2.88 billion USD

Conclusion from Table 2: the movie "Gone with the Wind" brought its creators about 7.09 / 2.88=2.5 times more money than the movie "Avatar".

Thus, to determine the highest-grossing film of mankind, it is necessary to compare the world collections of all films of the USA, Italy, France, the USSR, India, China and other countries in gold equivalent from the beginning of the XX century to the present day – and the film that brought its creators more gold than other films will be the highest-grossing. the best movie in the history of cinema.

2. Gold prices for almost two hundred years

The table below shows gold prices in some years according to Kitco data [18].

Table 3. Gold prices, USD per troy ounce (31.1 grams)

Year	1833-1930	1934-1967	1972	1977	1980	1990	2000	2006	2012	2014
Price	20,65	34-35	58	147,7	612,6	383,5	279,1	603,5	1669	1266,4

§3. Transfer of historical amounts to 2014 amounts

Understanding the movement of the gold price allows you to compare the distant past with the present and draw interesting conclusions.

a) The Tom Sawyer Hoard

Tom Sawyer found a treasure trove containing 12,000 USD. This happened in the middle of the 19th century. According to Table 3, the dollar exchange rate from the 19th century to 2014 fell by 1266.4/20.65=61.3 times; thus, in 2014 prices, Tom's find would have cost more than 735 thousand USD.

b) Purchase of Alaska from the Russian Empire

The US purchase of Alaska from the Russian Empire for 7.2 million USD occurred in 1867 [11]. According to Table 3, the dollar exchange rate from the end of the XIX century to 2014 fell by 1266.4/20.65=61.3 times, so in 2014 prices, the value of Alaska would be about 440 million USD.

c) The cost of constructing the Vorontsov Palace

The cost of building the Vorontsov Palace (Alupka, Crimea) was about 9 million silver rubles [3]. The palace was built in 1828-1848. It should be noted that in this example, only the cost of building the palace itself with the adjacent park is calculated in 2014 prices, and not the cost of the palace complex, as it was in 2014, since today's palace has a lot of old books, sculptures, paintings and other antiques that were bought by the owners of the palace in the XIX century. century and the cost of which was not included in the original price of the construction of the palace. The land on which the Alupka Palace is located is located on the Southern coast of Crimea and is one of the most expensive lands in Crimea; however, the cost of the actual land of the palace and park complex is also not included in the cost of building the palace.

The first option. Calculation using the silver price.

We will take the cost of silver according to Kitco data[19]. The silver ruble of that era contained 18 grams of pure silver, that is, 162 tons of silver or 5209 ounces of silver were spent on the palace. In 2014, silver cost $ 19.078 per ounce, which means that the value of gold calculated "by silver" in 2014 prices is $ 99.38 millionUSD. However, the value of silver relative to gold has fallen for almost 200 years.

Table 4. Relative values of silver and gold

Year	Silver price, USD per ounce	Gold price, USD per ounce	Ratio of gold price to Silver
price 1833	1,293	20,65	16,0
1910	0,553	20,64	37,3
2014	19,78	1266,40	66,4

Conclusion from Table 4: over the past 200 years, the value of silver relative to gold has fallen 66.4 / 16=4.15 times.

The cost of the Vorontsov Palace, calculated "by silver", should be increased by the coefficient of the fall in the cost of silver to gold:

99.38*4.15=412.4 million USD.

The second option. Calculation using the ruble-dollar exchange rate.

In 1972-1834, 1 US dollar was worth 1.39 Russian rubles, and from 1834 to 1897, 1 dollar for 1 US dollar was worth 1.3 Russian rubles. 14 years out of 20 that the palace was built, the exchange rate was as follows: 1 USD=1.3 rubles, therefore, 6.92 million USD was spent on the construction of the palaceUSD. The gold exchange rate in 1834-1848 was 20.65 USD per ounce, which means that 335.26 thousand ounces of gold were spent on the construction of the palace. In 2014, an ounce of gold cost $1,266. 40, which means that the construction price of the Vorontsov Palace is: $ 424.6 million.

So, the cost of building the palace:

the first settlement option is 412.4 million USD,

the second settlement option is 424.6 million USD,

that gives an average of 418.5 million USD.

Conclusion: the cost of constructing the Vorontsov Palace is approximately 420 million USD in 2014 prices.

d) The cost of building the Taj Mahal

The cost of constructing the Taj Mahal (Agra, India) was about 32 million rupees [10]. The Taj Mahal was built in 1632-1653. At that time, the Indian rupee weighed 11.53 grams of 970-proof silver, meaning that there were 11.18 grams of pure silver in one rupee [9], therefore, 357.9 tons of silver or 11507.76 thousand ounces of silver were spent on the entire Taj Mahal. One ounce of silver in 2014 cost 19,078 USD, so the price of the construction of the Taj Mahal "in silver" is equal to 219.5 million USD. This cost should be increased by a reduction in the value of silver to gold equal to 4.15 (calculated in Table 3); thus, the cost of building the Taj Mahal in 2014 prices is approximately 910 million USD.

e) The state of Seneca

Seneca lived in Rome from 4 BC to 64 AD. Seneca was a famous philosopher and mentor of the ancient Roman emperor Nero. Seneca's fortune is estimated at 300 million sesterces[8]. One golden aureus was equal to one hundred sesterces. During the time of Emperor Nero, the gold content of aureus dropped from 8.18 grams to 7.27 grams. [1] Based on these figures, it turns out that Seneca owned a fortune of 21.8 tons of gold, or about 890 million USD at the 2014 exchange rate.

f) Prices in Ancient Greece

One ancient Greek Attic drachma weighed about 4.25 grams [7] and had, according to various sources, 900, 940 or another sample. Taking a 940 sample in the Attic drachma, we get that they contained approximately 4.00 grams of pure silver. At that time, gold was worth about 13 times more than silver [5], so the cost of a drachma was approximately 0.308 grams of gold, or 12.54 USD at the 2014 exchange rate.

Table 5. Approximate prices of ancient Greek goods and the cost of ancient Greek work in USD in 2014

Product, job, or amount of wealth	Value in Ancient Greek drachmas [16]	Approximate prices of goods and work cost in USD in 2014
Sheep	12-16	150-200
Bull (cow)	51-75	640-940
Shoes	8	100
House in Athens	200-300	2500-3700
Country estate	2000-6000	25000-75000
Teacher's salary for the year	500-700	6300-8800
Carpenter's salary for the year	500-600	6300-7500
Architect's salary for the year	over 10000	over 125000
Sailor's salary on the trier 210 days season	70	870
Rich Athenian's fortune	over 2000	over 25000
Dowry of a rich Athenian woman	3000-6000	37600-75000
Statue of Athena in The Parthenon	6 million	75 million
Two golden statues of Nika	1.2 million	15 million
The Parthenon	4.2 million	52.5 million
The fortune of one of the richest Greeks	1.2 million	15 million

g) Darius I's income

Herodotus wrote that the Persian king Darius I (549-485 BC) received an annual income from all the provinces (satrapies) of his empire in the amount of 14,560 silver talents [6]; in addition, Herodotus believed that at that time gold was worth 13 times more than silver [5], so the income of Darius I is equal to 1120 talents in gold. The Babylonian talent, which was popular in the Persian Empire, weighed 30 kg [16]. By analogy with the ancient Greek Attic drachma described in the previous paragraph, we assume a sample of gold in a talent equal to 940, which means that the Persian king received an annual income equal to 31.6 tons of gold, or approximately 1.3 billion USD in 2014 prices.

§3. US Dollar inflation and deflation

Taking gold as a basis, you can easily calculate the inflation and deflation of the US dollar. To do this, we will use the Kitco gold price data [18].

It should be remembered that, for example, with inflation of 200%, the price of gold increases not by 2 times, but by 3 times; and with deflation, for example, at 300%, the price of gold falls not by 3 times, but by 4 times.

Table 6. US Dollar inflation and deflation over different time periods

Period	1833-1929	1930-1934	1934-1968	1968-1980	1980-2001	2001-2012	2012-2014
Inflation for the period, in %	about 0%	about 68%	11%	1480%		515%	
Deflation for the period, in %					125%		32%

US dollar inflation according to Table 6 for 100 years (1914-2014) is approximately equal to: 1,68*1,11*15,8/2,25*6,15/1,32=61,01 or about 6000%.

Let's check the US dollar inflation calculations in Table 3: in 1914, an ounce of gold was worth 20.72 USD, and in 2014 it was worth 1266.40 USD, that is, the US dollar inflation for 100 years (1914-2014) is 1266.40/20.72=61.12 or approximately 6000%.

Conclusion on US dollar inflation: the total inflation of the US dollar relative to gold is approximately 6000% for the period from 1914 to 2014.

4. Changes in the fortunes of some of the richest people

The wealth of each of the billionaires in the tables below is given according to the rating of Forbes magazine[13, 20, 21], and the gold exchange rate is taken from Kitco [18].

The changing fortunes of many billionaires show how US dollar inflation radically reduces their fortunes.

Wealth, expressed in billions of USD or tons of gold, is related by the formula:

Gold (in tons) = Wealth (in billions of USD)/Gold exchange rate (average annual price of one troy ounce of gold, in USD)*1000*31.1

a) Foreign billionaires

Table 7. Capital change of Carlos Slim Helu

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2004	2003	13,9	363,38	1189,6
2014	2013	72,0	1411,23	1586,7

Conclusion according to Table 7: in 10 years, Carlos Slim Helu's fortune has increased more than 1.3 times.

Table 8. Capital change of William Henry Gates III

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
1999	1998	90,0,0	294,24	9512,6
2014	2013	76,0	1411,23	1674,9

Conclusions from Table 8:

1) If William Henry Gates III had used all his money to buy gold in 1998, he would have had about $ 431.7 billion at the end of 2013USD.

2) In 15 years, William Henry Gates III fortune has decreased by more than 5.5 times.

Table 9. Capital change of Lawrence Ellison

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
1999	1998	48,0	294,24	5073,4
2014	2013	48,0	1411,23	1057,8

Conclusions from table 9:

1) If Lawrence Ellison had used all his money to buy gold in 1998, he would have had about $ 230.2 billion at the end of 2013USD.

2) In 15 years, Lawrence Ellison's fortune has decreased 4.8 times.

Table 10. Capital change of Warren Buffett

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
1999	1998	36,0	294,24	3805,1
2014	2013	58,2	1411,23	1282,6

Conclusions from table 10:

1) If Warren Buffett had used all his money to buy gold in 1998, he would have had about $ 172.7 billion at the end of 2013USD.

2) In 15 years, Warren Buffett's fortune has decreased almost 3 times.

Table 11. Capital change of Lillian Bettencourt

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
1999	1998	13,9	294,24	1469,2
2014	2013	34,6	1411,23	762,5

Conclusions from table 11:

1) If Lillian Bettencourt had used all her money to buy gold in 1998, she would have had about 66.7 billion USD at the end of 2013.

2) In 15 years, Lillian Bettencourt's fortune has decreased by about 2 times.

The John Rockefeller Fortune

John Rockefeller's net worth was estimated at $ 1.4 billion in 1937USD. In that year, the gold exchange rate was 34.79 USD per ounce, that is, in 1937, this billionaire had 1,251. 5 tons of gold, or approximately 51 billion USD at the 2014 exchange rate.

b) Russian billionaires

Table 12. Capital change of Sergey Galitsky

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	0,46	409,72	34,9
2015	2014	8,3	1266,40	203,8

Conclusion according to Table 12: over 10 years, the state of Sergey Galitsky has increased almost 6 times.

Table 13. Capital change of Dmitry Rybolovlev

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	0,75	409,72	56,9
2015	2014	8,5	1266,40	208,7

Conclusion according to Table 13: over 15 years, Dmitry Rybolovlev's fortune has increased approximately 3.7 times.

Table 14. Capital change of Alisher Usmanov

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	2	409,72	34,9
2015	2014	14,4	1266,40	203,8

Conclusion according to Table 14: over 10 years, Alisher Usmanov's fortune has increased 2.3 times.

Table 15. Capital change of Roman Abramovich

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	14,7	409,72	1115,8
2015	2014	9,1	1266,4	223,5

Conclusions from table 15:

1) If Roman Abramovich had used all his money to buy gold in 2004, then at the end of 2014 he would have had about 45.4 billion USD.

2) In 10 years, Roman Abramovich's fortune has decreased by 5 times.

Table 16. Capital change of Oleg Deripaska

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	5,8	409,72	440,3
2015	2014	6,2	1266,4	152,3

Conclusions from table 16:

1) If Oleg Deripaska had used all his money to buy gold in 2004, he would have had almost $ 17.9 billion at the end of 2014USD.

2) In 10 years, Oleg Deripaska's fortune has decreased almost 3 times.

Table 17. Capital change of Mikhail Prokhorov

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	4,7	409,72	356,8
2015	2014	9,9	1266,4	243,1

Conclusions from table 17:

1) If Mikhail Prokhorov had used all his money to buy gold in 2004, then at the end of 2014 he would have had about 14.5 billion USD.

2) In 10 years, Mikhail Prokhorov's fortune has decreased almost 1.5 times.

Condition of Nikolay Vtorov

The fortune of the richest entrepreneur of tsarist Russia, Nikolai Vtorov, in 1914 was estimated at more than 60 million rubles [4]. In that year, the gold standard was in effect, that is, one Russian ruble contained approximately 0.774 grams of pure gold. Thus, the Russian billionaire's fortune can be estimated at more than 46.4 tons of gold, or approximately 1.9 billion USD at the 2014 exchange rate.

c) Ukrainian billionaires

Table 18. Capital change of Sergey Taruta

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	1,0	409,72	75,9
2015	2014	0,144	1266,40	3,5

Conclusions from table 18:

1) If Sergey Taruta had used all his money to buy gold in 2004, then at the end of 2014 he would have had about 3.1 billion USD.

2) Over 10 years, Sergey Taruta's fortune has decreased approximately 21.5 times.

Table 19. Capital change of Viktor Pinchuk

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	1,3	409,72	98,7
2015	2014	1,5	1266,40	36,8

Conclusions from Table 19:

1) If Viktor Pinchuk had used all his money to buy gold in 2004, then at the end of 2014 he would have had about 4 billion USD.

2) Over 10 years, Viktor Pinchuk's fortune has decreased 2.7 times.

Table 20. Capital change of Rinat Akhmetov

Year of making the Forbes list	Year at the end of which the billionaire's fortune is estimated	The billionaire's fortune, billion USD	Average gold exchange rate for the valuation year, USD per ounce	The billionaire's fortune, tons of gold
2005	2004	2,4	409,72	182,1
2015	2014	6,9	1266,40	169,4

Conclusions from table 20:

1) If Rinat Akhmetov had used all his money to buy gold in 2004, then at the end of 2014 he would have had about 7.4 billion USD.

2) In 10 years, Rinat Akhmetov's fortune has decreased by 1.07 times.

5. Analysis of GDP and GDP per capita for different countries

Often, governments of different countries pass off ordinary inflation as economic growth: for example, economic growth expressed in monetary units is 3%, and inflation, that is, the depreciation of money, is 5%. As you can see, there can be no question of any growth – there is a drop in the economy by 5%-3%=2%. Comparing in gold terms, it is very easy to see the growth and decline of real GDP or GDP per capita.

If you look at the period from 1970 to 2013, for example, it turns out that in 1970-1975, people lived richer than they do now; although in our time, the population has a lot of things on their hands that people did not even dream of before, for example, a lot of personal electronics. The fact that in the world in 1980 there were very few people who owned a personal computer, while in 2010 there were many times more such people, suggests that computer technologies have reached a high degree of development and have become cheap, making people's lives more comfortable and often better, but not that people began to live richer lives. By the way, the use of a computer as a means of communication or for games is not recognized by all people in the world as an "improvement in life" - there is no substitute for live communication, and active games with peers in the fresh air are better for human health than a sedentary lifestyle at the computer.

In section 5 of this study, several tables are given with GDP and GDP per capita, for which data in USD were taken from UN databases [23, 24]. The sample covers the period from 1970 to 2013. The calculations were made in mid-2015, so there is no information for 2014 in the UN database yet, which is why 2013 is taken as the closest year to date.

1970 was chosen because at that time the dollar standard (the Bretton Woods monetary System) was still in effect, that is, the world's major currencies were rigidly pegged to the US dollar, which, in turn, was rigidly pegged to gold. But from 1971 to 1973, the dollar standard was gradually abolished, and the price of gold began to be determined by the balance of supply and demand in a free market.

For clarity, calculations were made in 5-year increments, except for calculations for the United States, Russia, and Ukraine.

Table 21. World GDP and GDP per capita in the world

Year	World GDP, billion USD	GDP per capita in the world, USD	Gold rate, USD per ounce	World GDP, thousand tons of gold	GDP per capita in the world, gram of gold
1970	3398,7	921	35,94	2941,0	797,0
1975	6630,5	1630	161,02	1280,6	314,8
1980	12265,0	2759	612,56	622,7	140,1

1985	22880,6	2772	317,26	1321,0	271,7
1990	30827,5	4303	383,51	1855,5	348,9
1995	33224,8	5372	384,17	2495,6	434,9
2000	47153,4	5423	279,11	3702,1	604,3
2005	47153,4	7240	444,74	3297,4	506,3
2010	65349,2	9451	1224,53	1659,7	240,0
2013	75566,3	10553	1411,23	1665,3	232,6

Conclusions from table 21:

1) Global GDP collapsed in the late 1970s-early 1980s, then recovered and surpassed pre-crisis levels, peaking in the early 2000s, and then began to fall again from the middle.

2) From 1970 to 2013, the world's population grew 2-fold, while the value of GDP per capita fell 3.5-fold.

Table 22. US GDP and GDP per US resident

Year	of U.S. GDP, billion USD	GDP per capita of the United States, USD is	the price of gold, USD / ounce	US GDP, tons of gold	GDP per capita of the United States, grams of gold	Rise or fall of the US economy
1970	1075,9	5126	of 35.94	**931,0**	**4435,7**	basis
1971	1167,8	5514	40,80	890,2	4203,1	fall
1972	1282,4	6002	58,16	685,7	3209,5	fall
1973	1428,5	6627	97,32	456,5	2117,8	fall
1974	1548,8	7122	159,26	**of 302, 4**	**1390,8**	bottom of the fall
1975	1688,9	7696	161,02	of 326.2	1486,4	growth
1976	1877,6	8478	124,84	**467,7**	**2112,0**	peak of growth
1977	2086,0	9330	147,71	439,2	1964,4	fall
1978	2356,6	10440	193,22	of 379.3	1680,4	fall
1979	2632,1	11547	306,68	266.9 m	1171,0	fall
1980	2862,5	12436	612,56	**145,3**	**631,4**	bottom of the fall
1981	3211,0	13814	460,03	217,1	933,9	growth
1982	3345,0	14250	375,67	276,9	1179,7	peak
1983	3638,1	15345	424,35	**266,6**	**1124,6**	bottom of the fall
1984	4040,7	16875	360,48	348,6	1455,9	growth

1985	4346,7	17971	317,26	**426,1**	**1761,6**	peak
1986	4590,2	18787	367,66	388,3	1589,2	fall
1987	4870,2	19731	446,46	**339,3**	**1374,4**	bottom of the fall
1988	5252,6	21063	436,94	373,9	1499,2	growth
1989	5657,7	22457	381,44	461,3	1831,0	growth
1990	5979,6	23495	383,51	484,9	1905,3	growth
1991	6164,0	24016	362,11	529,4	2062,6	growth
1992	6539,3	25185	343,82	591,5	2278,1	growth
1993	6878,7	26226	359,77	594,6	2267,1	growth
1994	7308,8	27573	of 348.00	**653,2**	**2464,1**	peak of growth
1995	7664,1	28593	384,17	**620,4**	**2314,7**	bottom of the fall
1996	8100,2	29865	387,77	649,7	2395,2	growth
1997	8608,5	31348	330,98	808,9	2945,6	growth
1998	9089,2	32689	294,24	960,7	3455,1	growth
1999	9660,6	34328	278,88	1077,3	3828,2	growth
2000	10284,8	36138	279,11	1146,0	4026,7	growth
2001	10321,8	36941	271,04	**1184,4**	**4238,7**	peak
2002	10977,5	37818	309,73	1102,3	3797,3	fall
2003	11510,7	39301	363,38	985,1	3363,6	fall
2004	12294,9	41541	409,72	933,3	3153,2	fall
2005	13093,7	43914	444,74	915,6	3070,8	fall
2006	13855,9	46042	603,46	714,1	2372,8	fall
2007	14477,6	47657	695,39	647,5	2131,4	fall
2008	14718,6	47997	871,96	525,0	1711,9	fall
2009	14418,7	46588	972,35	461,2	1490,1	fall
2010	14964,4	47925	1224,53	380,1	1217,2	fall
2011	15517,9	49277	1571,52	**307,1**	**975,2**	bottom of the fall
2012	16163,2	50907	1668,95	**of 301.2**	**948,6**	bottom of the fall
2013	16768,1	52392	1411,23	369,5	1154,6	growth

Conclusions from table 22:

1) The decline in US GDP and GDP per US resident, calculated by the value of gold, clearly shows the dates of crises, as well as the periods of decline and growth of the economy.

2) The continuous growth of US GDP and GDP per capita from 1970 to 2013 is explained by dollar inflation.

3) US GDP and GDP per US resident rise and fall periodically.

4) The years 1998 to 2005 are the years of greatest prosperity for the US economy and its residents over the period from 1974 to 2013.

5) Most affluent for the period from 1970 to 2013, residents of the United States felt in 1970.

6) Between 1970 and 2013, the value of US GDP expressed in US dollars increased 15.6 times, while the value of US GDP expressed in the value of gold fell 2.5 times.

7) Between 1970 and 2013, the value of GDP per US resident, expressed in US dollars, increased 10.2 times, while the value of GDP per US resident, expressed in the value of gold, fell 3.8 times.

8) The global economic crisis of 2008 was actually prepared since 2002, and the peak of the crisis occurred in 2011-2012, while only since 2013 the US economy began to recover.

9) The main geopolitan enemy of the United States-the Soviet Union-lost the Cold War and collapsed in 1991. In 2001, the wealth of US citizens peaked between 1971 and 2013. Thus, it can be argued that due to the collapse of the USSR, the value of US GDP increased from 1992 to 2001 by 2 times or by 592.8 thousand tons of gold, and GDP per US citizen (level of wealth) increased by 1.9 times or by 1960.6 grams of gold. The argument that the US GDP grew significantly in the 1990s due to the use of high technologies does not hold water: computers have been used in the US and the USSR since the 1970s, and the development of the Internet led to the dot-com crash in 2000.

Table 23. Share of the US economy in the world, in %

1970	1975	1980	1985	1990	1995	2000	2005	2010	2013
31,7	25,5	23,3	32,3	26,1	24,9	31,0	27,8	22,9	22,2

Conclusion from Table 23: the peak share of the US economy in the world, compared to 1970, was the mid-1980s and late 1990s-early 2000s.

Table 24. China's GDP and GDP per inhabitant of China

Year	China's GDP, billion USD	GDP per inhabitant of China, USD	Gold exchange rate, USD per ounce	China's GDP, thousand tons of gold	GDP per inhabitant of China, gram of gold
1970	91,0	112	35,94	78,8	96,9
1975	160,3	176	161,02	31,0	34,0
1980	306,5	311	612,56	15,6	15,8
1985	309,1	291	317,26	30,3	28,5
1990	404,5	347	383,51	32,8	28,1
1995	757,0	612	384,17	61,3	49,5
2000	1192,8	932	279,11	132,9	103,8
2005	2287,2	1735	444,74	159,9	121,3
2010	5949,8	4375	1224,53	151,1	111,1
2013	9181,0	6626	1411,23	202,3	146,0

Conclusions from table 24:

1) China's GDP fell from 1970 to the early 1980s, after which it began to grow up to the present time (with a slight subsidence around 2010).

2) From 1970 to 1990, China's population grew 1.4 times, while GDP per inhabitant of China fell 3.5 times.

3) From 1990 to 2013, China's population grew 1.2 times, and GDP per inhabitant of China grew 5 times.

Table 25. Share of China's economy in the world, in %

1970	1975	1980	1985	1990	1995	2000	2005	2010	2013
2,7	2,4	2,5	2,3	1,8	2,5	3,6	4,9	9,1	12,1

Conclusion from Table 25: from 1970 to 1990, the share of China's economy in the world gradually declined, and from 1970 to 2013, it grew very strongly.

Table 26. GDP of the USSR and GDP per inhabitant of the USSR

Year	GDP of the USSR, billion USD	GDP per inhabitant of the USSR, USD	Gold rate, USD per ounce	GDP of the USSR, thousand tons of gold	GDP per inhabitant of the USSR, gram of gold
1970	433,4	1790	35,94	375,0	1548,9
1975	686,0	2704	161,02	132,5	522,3
1980	940,0	3549	612,56	47,7	180,2
1985	914,1	3299	317,26	89,6	323,4
1990	778,4	2696	383.51	63.1	218.6

Conclusions from tables 22 and 26:

1) Between 1970 and 1990, the USSR's GDP fell 5.9 times, while the US GDP fell 1.9 times.

2) Between 1970 and 1990, GDP per inhabitant of the USSR fell 7 times, and GDP per inhabitant of the USA-2.3 times.

3) Based on points 1 and 2, it can be said that the citizens of the USSR were reasonably dissatisfied with the internal economic policy of the Soviet Union; however, the then communist authorities were unable to eliminate this discontent, which eventually became one of the factors that pushed the USSR to collapse in 1991.

Table 27. GDP of Russia and GDP per inhabitant of Russia

Year	Russian GDP, billion USD	GDP per inhabitant of Russia, USD	Gold exchange rate, USD per ounce	Russian GDP, thousand tons of gold	GDP per inhabitant of Russia, gram of gold	Rise or fall of the Russian economy
1990	570,4	3850	383,51	46,3	312,2	был СССР
1991	559,9	3768	362,11	48,1	323,6	распад СССР
1992	489,6	3291	343,82	**44,3**	**297,7**	basis

1993	457,7	3075	359,77	39,6	265,8	fall
1994	408,0	2743	of 348.00	36,5	245,1	fall
1995	399.5 opening	2688	384,17	32,3	217,6	fall
1996	392,1	2643	387,77	**of 31.4**	**212,0**	bottom of the fall
1997	404,9	2735	330,98	**38,0**	**257,0**	peak of growth
1998	271,0	1834	294,24	28,6	193,8	fall
1999	159,9	1330	278,88	**of 17.8**	**and 148.3**	bottom of the fall
2000	259,7	1770	279,11	28,9	197,2	growth
2001	306,6	2098	271,04	**35,2**	**240,7**	peak
2002	345,5	2374	309,73	**34,7**	**238,4**	the bottom fall
2003	430,3	2970	363,38	36,8	254,2	growth
2004	590,9	4094	409,72	44,9	310,8	growth
2005	764,0	5308	444,74	**53,4**	**371,2**	peak of growth
2006	989,9	6888	603,46	**51,0**	**355,0**	bottom of the fall
2007	1299,7	9048	695,39	58,1	404,7	growth
2008	1668,8	11560	871,96	**59,5**	**412,3**	peak of growth
2009	1222,6	8509	972,35	39,1	272,2	fall
2010	1524,9	10618	1224,53	**38,7**	**269,7**	bottom of the fall
2011	1904,8	13280	1571,52	**37,7**	**262,8**	bottom of the fall
2012	2014,5	14091	1668,95	**37,5**	**262,6**	bottom of the fall
2013	2096,8	14680	1411,23	46,2	323,5	growth

Conclusions from table 27:

1) The values of Russia's GDP and GDP per inhabitant of Russia, as they were in 1991, remain approximately the same in 2013.

2) The average annual exchange rate of the ruble in 1992 was 288 rubles / USD, and the average annual exchange rate in 1997 was already 5785 rubles/ USD. On January 1, 1998, the ruble was denominated 1000 times, and on August 16, 1996, the exchange rate was 6.29 rubles / USD. Then there was a default in 1998, and on January 1, 1999 the exchange rate became 20.65 rubles / USD. The average annual exchange rate in 1999 was 24.62 rubles / USD [288]. Thus, for the period from 1992 to 1999**, the ruble devalued by** 24.62 * 1000/288=**85.5 times**.

At the same time, the value **of GDP** from 1992 to 1999 **fell only 2.5 times**, and the value **of GDP per inhabitant of Russia decreased only 2 times**.

3) In 2005-2008, citizens of independent Russia lived better than in 1990-1991 under the USSR.

4) The global economic crisis of 2008 ended the period of growth in the well-being of Russian residents, which continued with minor drops since 1999, plunging the country's economy in 2009 to the bottom in which the Russian economy was in 2010-2012, after which economic growth began.

Conclusions from tables 22 and 27:

1) The drop in Russian GDP from the top of growth in 2008 to the bottom in 2012 is 1.6 times; while the value of US GDP for the same period fell by 1.7 times Not only that, the value of US GDP from the top of growth in 2001 to the bottom of decline in 2012 fell by 3.9 times, and the value of Russia's GDP grew 1.07 times over the same period.

As can be seen from the above comparisons, ***the Russian economy shows a higher resilience to shocks than the US economy***.

2)

2.1) The value of GDP per inhabitant of Russia increased from 1992 to 2013 by 1.09 times, and the value of GDP per inhabitant of the United States during the same period fell by 2 times.

2.2) The ratio of the largest (2001) and smallest (2012) values of US GDP for the period from 1992 to 2013 is 3.9 to 1. The ratio of the largest (2008) and smallest (1998) values of Russian GDP for the period from 1992 to 2013 is 2.1 to 1.

As can be seen from paragraphs 2.1 and 2.2, the Russian economy tends to be stable over multi-year periods, while the US economy is more prone to rapid growth and radical decline.

3) In 1992, the GDP per inhabitant of the United States was 7.7 times greater than the GDP per inhabitant of Russia. However, in 2013, GDP per inhabitant of the United States became 3.6 times more than GDP per inhabitant of Russia. As you can see, ***the gap between the well-being of US and Russian citizens is steadily narrowing***.

4) From point 3, we can make a forecast that in 2040 the welfare of citizens of the United States and Russia will be equal.

Table 28. GDP of Ukraine and GDP per inhabitant of Ukraine

Year	Ukrainian GDP, billion USD	GDP per inhabitant of Ukraine, USD	Gold exchange rate, USD per ounce	Ukrainian GDP, thousand tons of gold	GDP per inhabitant of Ukraine, gram of gold	The Growth or decline of the economy of Ukraine
1990	90,3	1748	383,51	7,3	141,8	был СССР
1991	85,2	1649	362,11	7,3	of 141.6	распад СССР
1992	78,5	1519	343,82	**7,1**	**137,4**	basis
1993	68,9	1337	359,77	6,0	115,6	fall
1994	54,2	1056	of 348.00	4,8	of 94.4	fall
1995	48,6	951	384,17	3,9	77,0	fall

1996	44,6	877	387,77	**3,6**	**70,3**	bottom of the fall
1997	50,2	995	330,98	**4,7**	**93,5**	peak of growth
1998	41,9	838	294,24	4,4	88,6	fall
1999	31,6	638	278,88	**3,5**	**71,1**	bottom of the fall
2000	31,3	637	279,11	**a 3.5**	**71.0 per**	bottom of the fall
2001	38,0	782	271,04	**4,4**	**89,7**	peak
2002	42,4	880	309,73	**4,3**	**88,4**	bottom of the fall
2003	50,1	1049	363,38	4,3	89,8	growth
2004	64,9	1367	409,72	4,9	103,8	growth
2005	86,1	1828	444,74	**6,0**	**of 127.8**	peak of growth
2006	107,8	2299	603,46	**5,6**	**118,5**	bottom of the fall
2007	142,7	3059	695,39	6,4	136,8	growth
2008	180,0	3874	871,96	**6,4**	**138,2**	peak of growth
2009	117,2	2534	972,35	3.7 V	81,0	fall
2010	136,4	2962	1224,53	3,5	75,2	fall
2011	163,4	3568	1571,52	**3,2**	**70,6**	bottom of the fall
2012	176,6	3879	1668,95	3,3	72,3	growth
2013	182	4024	1411,23	4,0	88,7	growth

Conclusions from table 28:

1) The GDP of Ukraine for the period of its independence since 1991 came as close as possible to the GDP of Ukraine in 1992 (the first year of state independence) only in 2008, reaching 90% of the country's GDP in 1992.

2) The value of GDP per inhabitant of Ukraine in 2008 exceeded the same indicator in 1992 by 0.5%.

3) Overall, between 1992 and 2013, Ukraine's GDP declined 1.8 times, while GDP per inhabitant of Ukraine fell 1.5 times.

4) In 1992, the average exchange rate of the Ukrainian karbovanets was 208 krb / USD. Hyperinflation led to the fact that in 1996, before the exchange of karbovanets for the hryvnia, 1 USD was already worth 176,000 karbovans [25], and 1 hryvnia was worth 100,000 karbovans. The average exchange rate in 1997 was 1.86 UAH / USD, and in 2001 it was already 5.37 UAH / USD [26]. As can be seen, from 1992 to 1997**, the national currency of Ukraine devalued** approximately 1.86 * 100000/208≈**900 times**.

At the same time, the values **of Ukraine's GDP and GDP per inhabitant of Ukraine decreased by about 1.5 times**.

5) The Maidan of 2004 and the Euromaidan of 2013-2014 took place during a period of sustained economic growth.

Conclusions from tables 27 and 28:

1) The economies of Russia and Ukraine show a similar pattern of ups and downs.

2)

2.1) The ratio of the largest (2008) and smallest (1998) values of Russia's GDP for the period from 1992 to 2013 is 2.1 to 1. The ratio of the largest (2008) and smallest (1996) values of Ukraine's GDP for the period from 1992 to 2013 is 2.0 to 1.

2.2) The value of GDP per inhabitant of Russia increased from 1992 to 2013 by 1.09 times, while the value of GDP per inhabitant of Ukraine during the same period fell by 1.8 times.

As can be seen from points 2.1 and 2.2, the Ukrainian economy shows a decrease in labor efficiency, while the Russian economy shows a slight increase in labor efficiency.

3) From 1992 to 1999, the ruble devalued by 85.5 times, the national currency of Ukraine (first karbovanets, and then the hryvnia) devalued by 4.13*100000/208≈1986 times. As you can see, the national currency of Ukraine has fallen 23 times more than the ruble.

4) The value of Russia's GDP from 1992 to 1999 fell by 2.5 times, while the value of GDP per inhabitant of Russia decreased by 2 times; the value of Ukraine's GDP from 1992 to 1999 fell by 2.0 times, and the value of GDP per inhabitant of Ukraine decreased by 1.9 times.

5) As can be seen from points 3 and 4, with a hundredfold or even a thousandfold fall in the national currency exchange rate, GDP indicators do not fall by hundreds or thousands of times!

In the case of high inflation, the welfare of the people does not decrease as much as the national currency exchange rate falls.

Conclusions from tables 22 and 28:

1) The ratio of the highest (2008) and lowest (1996) values of Ukraine's GDP for the period from 1992 to 2013 is 2.0 to 1.

The ratio of the highest (2001) and lowest (2012) values of US GDP for the period from 1992 to 2013 is 3.9 to 1.

As can be seen from paragraphs 2.1 and 2.2, the Ukrainian economy tends to be stable over multi-year periods, while the US economy is more prone to rapid growth and radical decline.

2) The value of GDP per inhabitant of Ukraine for the period from 1992 to 2013 fell by 1.8 times, and the value of GDP per inhabitant of the United States for the same period fell by 2 times; that is, the labor efficiency of US residents falls faster than the labor efficiency of Ukrainian residents falls.

3) In 1992, GDP per inhabitant of the United States was 16.6 times higher than GDP per inhabitant of Ukraine. However, in 2013, GDP per inhabitant of the United States became 13.0 times more than GDP per inhabitant of Ukraine. As you can see, ***the gap between the well-being of US and Ukrainian citizens is steadily narrowing.*** Of course, you can calculate that in about 2100, GDP per US citizen and GDP per Ukrainian citizen will be equal, but 100 years is too long for such forecasts, so now it is impossible to say when the residents of Ukraine will be able to find well-being, as in the United States, it is impossible.

To show how the price of gold shows true GDP trends, below are tables showing changes in GDP and GDP per citizen for countries such as Germany, Great Britain, Greece, Japan, Iraq, Saudi Arabia, India,

Brazil, Egypt, South Africa and Angola. These tables are made in increments of 5 years, and no conclusions will be given on them, since to draw conclusions, it is advisable to build tables with annual indicators, as was done above for the United States, Russia and Ukraine.

Table 29. German GDP and GDP per German inhabitant

Year	German GDP, billion USD	GDP per inhabitant of Germany, USD	Gold exchange rate, USD per ounce	German GDP, thousand tons of gold	GDP per inhabitant of Germany, gram of gold
1970	215,0	2712	35,94	186,0	2346,8
1975	488,8	6131	161,02	94,4	1184,2
1980	946,7	11958	612,56	48,1	607,1
1985	729,8	9249	317,26	71,5	906,7
1990	1764,9	21928	383,51	143,1	1778,2
1995	2590,3	31153	384,17	209,7	2522,0
2000	1947,2	23316	279,11	217,0	2598,0
2005	2857,6	34085	444,74	199,8	2383,5
2010	3412	41100	1224,53	86,7	1043,8
2013	3730,3	45091	1411,23	82,2	993,7

Table 30. UK GDP and GDP per UK inhabitant

Year	GDP of UK, billion USD	GDP per inhabitant of UK, USD	Gold rate, USD per ounce	GDP of UK, thousand tons of gold	GDP per UK inhabitant, gram of gold
1970	129,7	2331	35,94	112,2	2017,1
1975	245,7	4370	161,02	47,5	844,0
1980	563,5	10005	612,56	28,6	508,0
1985	482,6	8538	317,26	47,3	837,0
1990	1059,6	18519	383,51	85,9	1501,8
1995	1235,6	21305	384,17	100,0	1724,7
2000	1548,6	26296	279,11	172,6	2930,0
2005	2412,1	40008	444,74	168,7	2797,7
2010	2407,9	38796	1224,53	61,2	985,3
2013	2678,5	42423	1411,23	59,0	934,9

Table 31. Greek GDP and GDP per inhabitant of Greece

Year	GDP of Greece,	GDP per inhabitant of	Gold rate, USD per	GDP of Greece,	GDP per inhabitant of

	billion USD	Greece, USD	ounce	thousand tons of gold	Greece, gram of gold
1970	12,5	1424	35,94	10,8	1232,2
1975	27,2	3008	161,02	5,3	581,0
1980	54,2	5621	612,56	2,8	285,4
1985	45,6	4590	317,26	4,5	449,9
1990	93,3	9187	383,51	7,6	745,0
1995	130,5	12231	384,17	10,6	990,1
2000	125,9	11462	279,11	14,0	1277,2
2005	240,1	21743	444,74	16,8	1520,5
2010	294,2	26483	1224,53	7,5	672,6
2013	241,7	21722	1411,23	5,3	478,7

Table 32. Japanese GDP and GDP per Japanese inhabitant

Year	Japanese GDP, billion USD	GDP per Japanese resident, USD	Gold rate, USD per ounce	Japanese GDP, thousand tons of gold	GDP per Japanese inhabitant, gram of gold
1970	209,1	2016	35,94	180,9	1744,5
1975	512,9	4629	161,02	99,1	894,1
1980	1087	9378	612,56	55,2	476,1
1985	1384,5	11539	317,26	135,7	1131,1
1990	3103,7	25388	383,51	251,7	2058,8
1995	5333,9	42849	384,17	431,8	3468,8
2000	4731,2	37634	279,11	527,2	4193,4
2005	4571,9	36005	444,74	319,7	2517,8
2010	5495,4	43151	1224,53	139,6	1095,9
2013	4898,5	38528	1411,23	108,0	849,1

Table 33. GDP of Iraq and GDP per inhabitant of Iraq

Year	GDP of Iraq, billion USD	GDP per inhabitant of Iraq, USD	Gold rate, USD per ounce	GDP of Iraq, thousand tons of gold	GDP per inhabitant of Iraq, gram of gold
1970	2,4	238	35,94	2,1	205,9
1975	4,9	420	161,02	0,9	81,1
1980	12,6	920	612,56	0,6	46,7
1985	12,1	775	317,26	1,2	76,0
1990	171,1	975	383,51	13,9	79,1

1995	3,5	171	384,17	0,3	13,8
2000	16,9	710	279,11	1,9	79,1
2005	36,3	1325	444,74	2,5	92,7
2010	117,1	3783	1224,53	3,0	96,1
2013	195,5	5790	1411,23	4,3	127,6

Table 34. Saudi Arabia's GDP and GDP per Saudi Arabia inhabitant

Year	GDP of Saudi Arabia, billion USD	GDP per inhabitant of Saudi Arabia, USD	Gold rate, USD per ounce	GDP of Saudi Arabia, thousand tons of gold	GDP per inhabitant of Saudi Arabia, gram of gold
1970	5,4	927	35,94	4,7	802,2
1975	46,8	6340	161,02	9,0	1224,5
1980	164,5	16714	612,56	8,4	848,6
1985	103,9	7827	317,26	10,2	767,3
1990	116,6	7196	383,51	9,5	583,5
1995	142,3	7662	384,17	11,5	620,3
2000	188,4	9354	279,11	21,0	1042,3
2005	328,5	13303	444,74	23,0	930,3
2010	526,8	19327	1224,53	13,4	490,9
490,9 2013	748,4	25962	1411,23	16,5	572,1

Table 35. GDP of India and GDP per inhabitant of India

Year	GDP of India, billion USD	GDP per inhabitant of India, USD	Gold rate, USD per ounce	GDP of India, thousand tons of gold	GDP per inhabitant of India, gram of gold
1970	61,5	111	35,94	53,2	96,1
1975	100,4	161	161,02	19,4	31,1
1980	184,8	264	612,56	9,4	13,4
1985	226,5	290	317,26	22,2	28,4
1990	326,8	376	383,51	26,5	30,5
1995	369,2	386	384,17	29,9	31,2
2000	467,8	449	279,11	52,1	50,0
2005	837,5	743	444,74	58,6	52,0
2010	1704,8	1414	1224,53	43,3	35,9
2013	1937,8	1548	1411,23	42,7	34,1

Table 36. Brazilian GDP and GDP per Brazilian inhabitant

Year	Brazilian GDP, billion USD	GDP per Brazilian inhabitant, USD	Gold exchange rate, USD per ounce	Brazilian GDP, thousand tons of gold	GDP per Brazilian inhabitant, gram of gold
1970	35,2	367	35,94	30,5	317,6
1975	108,1	998	161,02	20,9	192,8
1980	191,1	1570	612,56	9,7	79,7
1985	187,4	1376	317,26	18,4	134,9
1990	402,1	2687	383,51	32,6	217,9
1995	769,0	4750	384,17	62,3	384,5
2000	644,7	3695	279,11	71,8	411,7
2005	882,0	4739	444,74	61,7	331,4
2010	2143,0	10978	1224,53	54,4	278,8
2013	2243,9	11199	1411,23	49,4	246,8

Table 37. GDP of Egypt GDP and GDP per Egyptian inhabitant

Year	GDP of Egypt, billion USD	GDP per inhabitant of Egypt, USD	Gold rate, USD per ounce	GDP of Egypt, thousand tons of gold	GDP per inhabitant of Egypt, gram of gold
1970	8,1	224	35,94	7,0	193,8
1975	12,7	314	161,02	2,5	60,6
1980	20,1	448	612,56	1,0	22,7
1985	23,8	473	317,26	2,3	46,4
1990	36,0	639	383,51	2,9	51,8
1995	65,8	1075	384,17	5,3	87,0
2000	95,7	1447	279,11	10,7	161,2
2005	94,5	1316	444,74	6,6	92,0
2010	214	2749	1224,53	5,4	69,8
2013	255,0	3110	1411,23	5,6	68,5

Table 38. GDP of South Africa and GDP per inhabitant of South Africa

Year	GDP of South Africa, billion USD	GDP per inhabitant of South Africa, USD	Gold rate, USD per ounce	GDP of South Africa, thousand tons of gold	GDP per inhabitant of South Africa, gram of gold
1970	18,4	819	35,94	15,9	708,7

1975	38,1	1483	161,02	7,4	286,4
1980	83,0	2854	612,56	4,2	144,9
1985	59,1	1791	317,26	5,8	175,6
1990	115,6	3141	383,51	9,4	254,7
1995	155,5	3753	384,17	12,6	303,8
2000	136,4	3041	279,11	15,2	338,8
2005	257,8	5344	444,74	18,0	373,7
2010	375,3	7295	1224,53	9,5	185,3
2013	366,1	6936	1411,23	8,1	152,9

Table 39. GDP of Angola and GDP per Angolan inhabitant

Annual	GDP of Angola, billion USD	GDP per Angolan inhabitant, USD	Gold exchange rate, USD per ounce	GDP of Angola, thousand tons of gold	GDP per Angolan inhabitant, gram of gold
1970	2,9	483	35,94	2,5	418,0
1975	3,1	472	161,02	0,6	91,2
1980	5,4	706	612,56	0,3	35,8
1985	6,9	757	317,26	0,7	74,2
1990	10,3	996	383,51	0,8	80,8
1995	5,0	413	384,17	0,4	33,4
2000	8,9	636	279,11	1,0	70,9
2005	32,8	1983	444,74	2,3	138,7
2010	85,2	4221	1224,53	2,2	107,2
2013	121,7	5668	1411,23	2,7	124,9

6. Economic results of the collapse of the USSR for the former Soviet Republics

More than 20 years have passed since the collapse of the USSR in 1991, and you can find out whether the former Soviet republics that became independent states have won or lost economically.

The dollar exchange rate in 1990 was 383.51 USD per ounce of gold, and in 2013 it was 1411.23 USD per ounce of gold.

Table 40. Economic results of the collapse of the USSR

	GDP in 1990, billion USD	GDP in 1990, tons of gold	GDP per capita in 1990, USD	GDP per capita in 1990, grams of gold	GDP in 2013, billion USD	GDP in 2013, tons of gold	GDP per capita in 2013, USD	GDP per capita in 2013, grams of gold	Cal. the rise or fall of the country's GDP	Cal. the rise or fall of the GDP per capita
The Soviet Union	778,4	63122,8	2696	218.6	-	-	-	-	-	-

growth										
Russia	570,4	46255,5	3850	312,2	2096,8	46208,3	14680	323,5	1,0	1,0
Kazakhstan	29,7	2408,5	1836	148,9	224,4	4945,2	13650	300,8	2,1	2,0
Belarus	18,9	1532,7	1838	149,0	71,7	1580,1	7664	168,9	1,0	1,1
Azerbaijan	6,5	527,1	904	73,3	73,6	1622,0	7814	172.2	3,1	2,3
Armenia	2,2	178,4	609	49,4	10,4	229,2	3504	77,2	1,3	1,6
Turkmenistan	3,1	251.4	838	68,0	41,9	923,4	7987	176,0	3,7	2,6
Lithuania	10,4	843,4	2804	227.4	46,4	1022,5	15381	339,0	1,2	1,5
Estonia	5,6	454,1	3550	287,9	24,9	548,7	19328	425,9	1,2	1,5
falling										
Ukraine	90,3	7322,7	1748	141,8	182	4010,8	4024	88,7	0,5	0,6
Georgia	8,4	681,2	1547	125,5	16,1	354,8	3715	81,9	0,5	0,7
Kyrgyzstan	2,6	210,8	594	48,2	7,2	158.7	1303	28,7	0,8	0,6
Moldova	4	324,4	910	73,8	8	176,3	2285	50,4	0,5	0,7
Tajikistan	2,8	227,1	536	43,5	8,5	187,3	1036	22,8	0,8	0,5
	growth economic indicator-and-drop the other									
Latvia	8,9	721,7	3326	269,7	31	683,2	15097	332,7	1,1	0,8
Uzbekistan	14,7	1192,1	716	58,1	57,2	1260,5	1977	43,6	0,9	1,2

Conclusions from table 40:

1) As a result of the collapse of the USSR, GDP per capita increased in Kazakhstan, Belarus, Azerbaijan, Armenia, Turkmenistan, Lithuania, Estonia and Uzbekistan.

2) As a result of the collapse of the USSR, GDP per capita fell in Ukraine, Georgia, Kyrgyzstan, Moldova, Tajikistan and Latvia.

3) Turkmenistan and Azerbaijan showed the greatest economic growth.

4) The greatest depth of economic decline was recorded by the economies of Ukraine, Georgia and Moldova; and the largest drop in GDP per capita was shown by Tajikistan.

5) Russia's GDP per capita has not changed since the collapse of the Soviet Union in 2013.

In the USSR, there was a planned distribution system, that is, the equalization of wages for all. Thus, those with higher labor productivity economically supported those with lower labor productivity. Comparing the average value of GDP per capita in the USSR, equal to 218.6 grams of gold in 1990, with the GDP per capita of each of the union republics, you can see which republics were donors and which were recipients of aid.

6) Donors in the Soviet Union were: Russia, Lithuania, Latvia and Estonia, and the main donor to the USSR was Russia.

7) Tajikistan and Armenia had the worst GDP per capita indicators in the USSR in 1990.

8) By 2013, Kazakhstan had increased its GDP per capita to a level exceeding the average level of GDP per capita in the USSR.

9) Only Estonia, Lithuania and Latvia were able to surpass the level of GDP per capita that Russia had in 1990, by 2013.

10) Estonia has the highest GDP per capita of all the former Soviet republics.

Comparing the average growth (decline)ratio GDP of the country and GDP per capita, it is possible to draw conclusions about which countries benefited from the collapse of the USSR, and which did not.

11) Russia did not gain anything, but it did not lose anything from the collapse of the USSR; at the same time, the citizens of the Russian Federation benefited from the collapse of the Soviet Union – Russia ceased to be a donor, as a result of which it was able to use 312.2/218.6 / 1.4 times more money for itself.

12) Such countries as Kazakhstan, Lithuania, Latvia and Estonia have benefited from the collapse of the USSR.

13) All other former republics of the USSR that are not listed in paragraphs 11 and 12 lost due to the collapse of the USSR.

§7. Economic outcomes of EU membership for some countries

Gold allows you to assess which countries have benefited financially from joining the EU, and which have lost out. Consider several countries

Table 41. GDP of Poland and GDP per inhabitant of Poland

Year	GDP of Poland, billion USD	GDP per inhabitant of Poland, USD	Gold exchange rate, USD per ounce	GDP of Poland, thousand tons of gold	GDP per inhabitant of Poland, gram of gold
1970	27,7	850	35,94	24,0	735,5
1975	48	1412	161,02	9,3	272,7
1980	58	1627	612,56	2,9	82,6
1985	71,9	1929	317,26	7,0	189,1
1990	64,7	1696	383,51	5,2	137,5
1995	139,4	3623	384,17	11,3	293,3
2000	171,7	4477	279,11	19,1	498,9
2005	304,4	7978	444,74	21,3	557,9
2010	476,7	12479	1224,53	12,1	316,9
2013	525,9	13760	1411,23	11,6	303,2

Poland joined the EU on May 1, 2004.

Conclusions from table 41:

1) Since the beginning of the 1980s, Poland's GDP has been growing, but after Poland joined the EU, it began to fall.

2) Since the early 1990s, GDP per inhabitant of Poland has been increasing, and after Poland joined the EU, it began to fall.

3) According to conclusions 1 and 2, EU membership proved to be economically unprofitable for the Polish population.

Table 42. Romania's GDP and GDP per Romanian inhabitant

Year	Romanian GDP, billion USD	GDP per Romanian inhabitant, USD	Gold exchange rate, USD per ounce	Romanian GDP, thousand tons of gold	GDP per Romanian inhabitant, gram of gold
1970	12,7	625	35,94	11,0	540,8
1975	22,9	1065	161,02	4,4	205,7
1980	36,4	1626	612,56	1,8	82,6
1985	50,7	2214	317,26	5,0	217,0
1990	40,6	1735	383,51	3,3	140,7
1995	37,6	1638	384,17	3,0	132,6
2000	37,3	1666	279,11	4,2	185,6
2005	99,2	4485	444,74	6,9	313,6
2010	164,8	7538	1224,53	4,2	191,4
2013	188,9	8705	1411,23	4,2	191,8

Romania joined the EU on January 1, 2007.

Conclusions from table 42:

1) Since the mid-1990s, Romania's GDP has been growing, but after Romania joined the EU, it began to fall.

2) Since the mid-1990s, GDP per inhabitant of Romania has been increasing, and after Romania's accession to the EU, it began to fall.

3) According to conclusions 1 and 2, EU membership proved to be economically unprofitable for the Romanian population.

Table 43. Spanish GDP and GDP per Spanish inhabitant

Year	Spanish GDP, billion USD	GDP per Spanish inhabitant, USD	Gold exchange rate, USD per ounce	Spanish GDP, thousand tons of gold	GDP per Spanish inhabitant, gram of gold
1970	39,8	1177	35,94	34,4	1018,5
1975	111,3	3115	161,02	21,5	601,6
1980	225,8	6022	612,56	11,5	305,7
1985	175,4	4559	317,26	17,2	446,9
1990	520,5	13385	383,51	42,2	1085,4
1995	596,2	15124	384,17	48,3	1224,3
2000	580,3	14407	279,11	64,7	1605,3
2005	1130,8	26063	444,74	79,1	1822,5
2010	1384,8	29987	1224,53	35,2	761,6
2013	1358,3	28944	1411,23	29,9	637,9

Spain joined the EU on January 1, 1986.

Conclusions from table 43:

1) Since Spain's accession to the EU, the country's GDP has grown steadily for 20 years, increasing by about 4.6 times.

2) In recent years, Spain's GDP has begun to fall sharply, but it has not fallen to the values that it had before Spain joined the EU. Spain's GDP is now about 1.7 times higher than it was before Spain joined the EU.

3) Since Spain's accession to the EU, GDP per Spanish resident has been growing steadily for 20 years, increasing by about 4 times.

4) In recent years, GDP per person in Spain has started to fall sharply, but it has not fallen to the values that it had before Spain joined the EU. Currently, GDP per person in Spain is about 1.4 times higher than it was before Spain joined the EU.

5) According to conclusions 1-4, Spain's accession to the EU has had a positive impact on its economy.

Table 44. Swedish GDP and GDP per Swedish inhabitant

Annual	Swedish GDP, billion USD	GDP per Swedish inhabitant, USD	Gold exchange rate, USD per ounce	Swedish GDP, thousand tons of gold	GDP per Swedish inhabitant, gram of gold
1970	37,6	4666	35,94	32,5	4037,6
1975	81,7	9974	161,02	15,8	1926,4
1980	140,1	16856	612,56	7,1	855,8
1985	112,5	13473	317,26	11,0	1320,7
1990	258,2	30161	383,51	20,9	2445,8
1995	264,1	29915	384,17	21,4	2421,7
2000	259,8	29282	279,11	28,9	3262,8
2005	389	43083	444,74	27,2	3012,7
2010	488,4	52053	1224,53	12,4	1322,0
2013	579,7	60566	1411,23	12,8	1334,7

Sweden joined the EU on 1 January 1995.

Conclusions from table 44:

1) Since Sweden's accession to the EU, the country's GDP has been growing steadily for 10 years, increasing by about 1.3 times.

2) In recent years, Sweden's GDP has begun to fall sharply, and has fallen to the values that it had before Sweden joined the EU. Sweden's GDP is now 1.7 times lower than it was before Sweden joined the EU.

3) Since Sweden's accession to the EU, GDP per Swedish resident has been growing steadily for 5 years, increasing by about 1.3 times.

4) Since the early 2000s, GDP per inhabitant of Sweden began to fall sharply, and fell to the values that it had before Sweden joined the EU. Now GDP per inhabitant of Sweden is 1.8 times lower than it was before Sweden joined the EU.

5) According to conclusions 1-4, Sweden's accession to the EU initially had a positive impact on its economy, but then became economically unprofitable.

General conclusions from tables 41-44:

1) The later a country joined the EU, the less profitable it was for it.

2) Countries that joined the EU before the early 1990s certainly benefited economically from this step.

3) The countries that joined the EU in the 1990s first started to win economically, but then they started to lose.

4) The countries that joined the EU in the 2000s and later lost out economically from this step.

5) ***Any countries that join the EU now or later will lose out economically from such a step.***

§8. Relative wealth

Relative values are usually calculated as a percentage, so if the source data is taken for the same year, you can count not only "in gold", but also in local or global currency, as is done, for example, in table 45 below: it shows that calculations in USD and "in gold" give the same results.

Table 45. Changing the ratio of Carlos Slim Ellu's fortune to the world's GDP

Year at the end of which the state of the billion dollar is considered dera	The state of the billion dollar, billion USD	Average gold exchange rate for the year of assessment, USD per ounce	The state of the billion dollar, tons of gold	World GDP, billion USD	World GDP, tons of gold	The ratio of the state of the billion dollar to the GDP of the world, in %
2003	13.9	363.38	1189.6	38656.3	3308412.5	0.036
2013	72.0	1411.23	1586.7	75566.3	1665293.3	0.095

Output from table 45:

Between 2003 and 2013, Carlos Slim Elu increased his wealth relative to all of humanity by 2.6 times: in 2003, his wealth was 0.036% of the world's GDP, and in 2013 it became 0.095% of the world's GDP.

Table 46. The size of a billionaire's fortune relative to the GDP of the country in which his wealth is located

Year	Billionaire's name	Country where most of his wealth is concentrated	Billionaire's fortune in a given year, billion USD	Country's GDP in a given year, billion USD	Ratio of the billionaire's fortune to the country's GDP in a given year, %
1998	Bill Gates	USA	90.0	9089.2	1.0
2004	Roman Abramovich	Russia	14.7	590.9	2.5
2004	Rinat Akhmetov	Ukraine	2.4	64.9	3.7
2010	Carlos Slim Elu	Mexico	74.0	1049.9	7.0
2003	Al-Waleed bin Talal Al-Saud	Saudi Arabia	21.5	214.6	10.0

Conclusion from table 46: very rich people can concentrate in their hands fortunes that are equal to several percent of the country's GDP.

9. Approximate examples of calculating the cost of States and the benefits of a war of conquest

All calculations are based on the formulas from the chapter " Prime cost of the state. Calculating the benefits of a War of Conquest "in the book "Money" [14].

A) The cost price of Russia.

According to table 26, the total GDP of Russia from 1992 to 2013 is 870,476. 4 tons of gold. If we take state revenues equal to one-third of this amount, we get that Russia brought in 29,0158. 8 tons of gold in 22 years, or 13,189. 0 tons of gold per year.

Almost the entire territory of Russia is indigenous territories, so you should take a coefficient of 300 for it, that is, the cost price of Russia is equal to:

G = 300*13189.0 = 3956710.91 tons of gold ≈ 3757 thousand tons of gold.

B) The prime cost of Ukraine.

According to Table 27, the total GDP of Ukraine from 1992 to 2013 is 101,527. 2 tons of gold. If we take state revenues equal to one-third of this amount, we get that Ukraine brought 33842.4 tons of gold in 22 years, or M=1538.3 tons of gold per year.

Ukraine became independent less than 20 years ago, so all of Ukraine from the point of view of Ukraine is a new land, so it should take a coefficient of 50, that is, the cost of Ukraine is equal to:

G = 50*1538.3 = 76914.6 tons of gold ≈ 77 thousand tons of gold.

C) Cost of sales in the United States

According to Table 21, the sum of all US GDP from 1989 to 2013 is equal to 1,740,408. 9 tons of gold. If we take government revenues equal to one-third of this amount, we get that the United States brought in 5801360.3 tons of gold in 25 years, or M=232054.4 tons of gold per year.

In general, the entire territory of the United States can be considered indigenous, that is, a coefficient of 300 should be assumed for it; however, the United States is currently at the beginning of the obscuration phase, that is, the ability to defend its own territory in the United States is radically declining, so the coefficient of 100 should be assumed for the United States. Thus, the cost price of the United States is equal to:

G = 100*232054.4 = 23205441.1 tons of gold ≈ 23205 thousand tons of gold.

D)

Table 47. Fromthe United States, Russia, and Ukraine Criminal Records Department

Country	Cost price, thousand tons of gold
USA	23205
Russia	3757
Ukraine	77

Conclusions from table 47:

1) The cost of the United States is higher than the cost of Russia and Ukraine by 6 and 300 times, respectively.

2) The prime cost of Russia is 50 times higher than the prime cost of Ukraine.

E) Calculation of the benefits from the conquest of Russia.

The Russian Federation is currently entering the inertial phase of ethnogenesis, so given Russia's nuclear weapons, it is impossible to conquer it.

F) Calculation of the benefits of the conquest of Ukraine

Ukraine, like Russia, is completing the fracture phase and entering the inertial phase of its development. Europe is now at the beginning of the obscuration phase, so it cannot conquer an ethnic group that is in an active phase (akmatic, fractured, inertial), so the EU cannot conquer Ukraine.

Russia may well conquer Ukraine: both countries are in the same ethnic phase, plus Russia has three times the population, but there is no point in conquering Ukraine: it is easier for Russia to reunite with Ukraine and co-exist in a single state, as it was recently under the USSR.

Turkey, probably, as well as the Russian Federation, can completely seize Ukraine.

Ukraine, as noted in paragraph B of this paragraph, is a new territory, so to estimate the profit from the capture of Ukraine, a coefficient of 100 should be applied, i.e.:

P = 100*1538.3 = 153829.2 tons of gold ≈ 154 thousand tons of gold

Let's assume that the cost of the army to conquer Ukraine is R=50 billion USD or R=1228 tons of gold in 2014 prices.

Then the net profit from the capture of Ukraine W = 153829-1228 = 152601 tons of gold ≈ 153 thousand tons of gold

Yield of war: H = W/R*100% = 12428% ≈ 12.5 thousand %

Payback period of the war D=R/M = 1228/1538 ≈ 0.8 years = 290 days

G) Calculating the benefits of conquering the United States

The United States, like Europe, is at the beginning of the obscuration phase, that is, it cannot hold its own territories for 100-150 years. According to my research "Military and practical application of the passion theory of ethnogenesis for building a political and ethnic picture of the world in the XXII century" part 15 §6 in the middle of the XXII century, the territory of the United States will be divided between Russia and Mexico [15]. Currently, the territory of the United States is absolutely inaccessible to conquest, but in about 50-100 years, Mexico may already begin to gradually take its territories from the United States.

Let's assume that due to obscuration, the United States will become 5 times poorer.

Mexico can conquer the southern half of the United States, so the yield of these territories will be equal to:

M/2/5 = 232054,4/2/5 = 23205,4 tons of gold per year

For territories that Mexico will seize from the United States, you can apply a coefficient of 200, i.e.:

P = 200*23205.4 = 4641088 tons of gold ≈ 4641 thousand tons of gold.

The United States is now a powerful military power and will continue to be for a long time, so it is estimated that to conquer half of the United States, Mexico will need to spend 500 billion USD in 2013 prices, or R=11018.8 tons of gold ≈11 thousand tons of gold.

Net gain from Mexico's takeover of the southern half of the United States:

W = 4641-11 = 4630 thousand tons of gold.

War Yield: H = 4630/11*100% = 42091% ≈ 42,1 thousand %

Payback period of the war D=R/M = 11018.8 / 23205.4 ≈ 0.47 years ≈ 170 days.

The main conclusion from section 9 is that *a successful war of conquest has an enormous return of tens of thousands of percent. No business, no trade, no new technologies can surpass the war in terms of profitability, as they can bring up to 50-100% of annual income, or up to 1000% in the case of particularly profitable illegal types of business.*

The unimaginably high profitability of successful wars of conquest is the economic basis for the fact that:

1) **Wars have always been and will always**be.

2) **Successful wars of conquest are the main source of wealth of states**.

3) **Mistakes in planning wars of conquest bring great calamity to States and peoples**.

Conclusions:

1. The US dollar's inflation rate is 6000% over 100 years. The continuity of growth in US GDP and GDP per capita from 1970 to 2013, expressed in US dollars, is explained by dollar inflation.

2. World GDP in 1970 was approximately 2900 thousand tons of gold, then it fell until the early 1990s, after which it began to grow to 3300-3700 thousand tons of gold in 2000-2005 and then fell again to 1600 thousand tons of gold in 2010-2013.

3. The value of GDP per inhabitant of the United States in 2010-2013 is equal to 950-1200 grams of gold per person, which corresponds to the value of GDP per inhabitant of the United States in 1979-1982.

4. The value of GDP per inhabitant of the USSR fell from 1,550 to 220 grams of gold per person during the period from 1970 to 1990.

5.

5.1. Russia's GDP in 2013 is approximately equal to Russia's GDP in 1991 and amounts to 46-48 thousand tons of gold.

5.2. 2008 is the most economically rich year since Russia's independence: The country's GDP was almost 60 thousand tons of gold.

5.3. The Russian economy is more resilient to shocks than the US economy.

6.

6.1. The value of GDP per inhabitant of Ukraine reached its peak in 2007-2008, which corresponds to the value of GDP per inhabitant of Ukraine in 1990-1992.

6.2. The Ukrainian economy shows a decrease in labor efficiency.

7. When the national currency devalues by 100-1000 times, the true GDP of the country, calculated in gold equivalent, falls by only 1.5-2 times.

8. Citizens of Kazakhstan, Lithuania, Latvia and Estonia, plus citizens of Russia, have benefited from the collapse of the USSR, while citizens of all other countries have lost economically.

9. The later a country joined the EU, the less profitable it was: countries that joined the EU before the early 1990s benefited economically, while countries that joined the EU after the early 2000s lost economically.

10. The richest people can concentrate in their hands a fortune equal to several percent of their country's GDP, for example, al-Walid bin Talal al-Saud owned 10% of Saudi Arabia's GDP in 2003.

11.

11.1. The fortune of the Roman philosopher Seneca was about 890 million USD at the 2014 exchange rate.

11.2. The annual income of the Persian King Darius I (549-485 BC) was about 1.3 billion USD at the 2014 exchange rate.

11.3. Nikolai Vtorov's fortune in 1914 was more than $ 1.9 billion at the 2014 exchange rate.

11.4. John Rockefeller's wealth in 1937 was approximately USD 51 billion at the 2014 exchange rate.

12.

12.1. Alaska was purchased by the United States from the Russian Empire for 440 million USD in 2014 prices.

12.2. The construction cost of the Vorontsov Palace (Alupka, Crimea) is approximately 420 million USD in 2014 prices.

12.3. The construction cost of the Taj Mahal (Agra, India) is approximately USD 910 million in 2014 prices.

13.

13.1. The film" Gone with the Wind " (1939) is the highest-grossing film in the history of American cinema in terms of collections in the United States

13.2. The film" Gone with the Wind " (1939) brought its creators 7.09 billion USD in 2014 prices, which is much higher than 2.88 billion USD in 2014 prices, which brought its creators the film "Avatar" (2010), considered the highest-grossing film.

13.3. The period from 1961 to 1970 is the time of the biggest box office receipts for American cinema

14. The cost price of the United States is 23,205 thousand tons of gold, and the cost price of Russia and Ukraine is 3,757 and 77 thousand tons of gold, respectively.

15. A successful war of conquest has a yield of tens of thousands of percent, so, firstly, wars have always been and will always be, and, secondly, the main basis for the wealth of nations is successful wars of conquest.

calculated in February-October 2015, written in October 2017

List of references:

1. Aureus // Tsivilka zhurnal. http://civilka.ru/rim/aureus.html (date accessed: 20.10.2017, in Russian).

2. Database on currency exchange rates // CBR of the Russian Federation [electronic database]. URL: http://www.cbr.ru/currency_base/ (date accessed: 20.10.2017, in Russian).

3. How the Vorontsov Palace was built: secrets of creation. // "Boss Crimea" Men's magazine. URL: https://www.facebook.com/boss.crimea/posts/595665207271619 (date accessed: 23.10.2017, in Russian).

4. Gakov V., Kozyrev M., Pertsova V. the largest states of tsarist Russia. What happened to the owners? // Forbes Russia — financial and economic magazine. URL: http://www.forbes.ru/milliardery-photogallery/339625-10-krupneyshih-sostoyaniy-carskoy-rossii-chto-proizoshlo-s://www.forbes.ru/milliardery-photogallery/339625-10-krupneyshih-sostoyaniy-carskoy-rossii-chto-proizoshlo-s (date accessed:27.10.2017, in Russian).

5. Herodotus. (2004) History, Moscow: OLMA-PRESS Invest, P. 153 (in Russian).

6. Herodotus. (2004) History, Moscow: OLMA-PRESS Invest, P. 151-153 (in Russian).

7. Drachma // CoinsHomeNet: network community of numismatists. URL: https://www.coinshome.net/ru/articles/Драхма (date accessed: 27.10.2017, in Russian).

8. The Lives Of Wonderful People. The Scillium process. Reproaches Seneca for his wealth // ZhZL URL: http://www.bibliotekar.ru/zhzl/51.htm (date accessed: 25.10.2017, in Russian).

9. Indian Rupee // RosInvest: network journal. URL: http://rosinvest.com/kurs/indijskaja-rupija://rosinvest.com/kurs/indijskaja-rupija (date accessed: 11.10.2017, in Russian).

10. Pilyugina D. Miracles of India: History of creation, photos, information for tourists // Vector of success: online magazine. 30.07.2014. http://21vu.ru/publ/659/20033 (date accessed: 25.10.2017, in Russian).

11. The history of the sale of Alaska by the Russian Empire to the United States in 1867 // RIA Novosti. URL: https://ria.ru/history_spravki/20131209/982918487.html (date accessed:22.10.2017, in Russian).

12. Mark Twain. The adventures of Tom Sawyer. URL: http://e-libra.su/read/317688-priklyucheniya-toma-sojera.html://e-libra.su/read/317688-priklyucheniya-toma-sojera.html (date accessed: 22.10.2017, in Russian).

13 Forbes Russia-financial and economic magazine. URL: http://www.forbes.ru/ (date accessed: 13.10.2017, in Russian).

14. Shchemelinin K. S. (2014) Money. Simferopol.: IT "Arial". P. 227-248 (in Russian).

15. Shchemelinin K. S. (2014) Military and practical application of the passion theory of ethnogenesis to build a political and ethnic picture of the world in the XXII century. Part 15 §6. URL: http://www.schemelinin.com/22-vek.html (date accessed: 30.10.2017, in Russian).

16. Encyclopedia "Around the world" // Talent, monetary unit. URL: http://www.vokrugsveta.ru/encyclopedia/index.php?title=%D0%A2%D0%B0%D0%BB%D0%B0%D0%BD%D1%82%2C_%D0%B4%D0%B5%D0%BD%D0%B5%D0%B6%D0%BD%D0%B0%D1%8F_%D0%B5%D0%B4%D0%B8%D0%BD%D0%B8%D1%86%D0%B0 (date accessed: 18.10.2017, in Russian).

17. Movie Index, A-Z // Box Office Mojo [electronic database]. URL: http://www.boxofficemojo.com/movies://www.boxofficemojo.com/movies/ (date accessed: 26.10.2017).

18. Historical Gold Charts and Data - London Fix / Kitco Metals Inc. [electronic database]. URL: https://www.kitco.com/charts/historicalgold.html (date accessed: 12.10.2017).

19. Historical Silver Data and Charts - London Fix / Kitco Metals Inc. [electronic database]. URL: https://www.kitco.com/charts/historicalsilver.html://www.kitco.com/charts/historicalsilver.html (date accessed: 14.10.2017).

20. Forbes. URL: https://www.forbes.com/ (date accessed: 13.10.2017).

21. Forbes Ukraine. URL: http://forbes.net.ua/ (date accessed: 13.10.2017, in Ukrainian).

22. John D. Rockefeller: The Richest Man in the World // Harvard Business School. URL: http://www.hbs.edu/faculty/Pages/item.aspx?num=47167 (date accessed: 12.10.2017).

23. UNdata // United Nations [electronic database]. URL: http://data.un.org/Default.aspx (date accessed: 13.10.2017).

24. World Population Prospects - Population Division // United Nations [electronic database]. URL: https://esa.un.org/unpd/wpp/DataQuery/ (date accessed: 14.10.2017).

25. The official exchange rate of the hryvnia against foreign currencies // NBU [electronic database in Ukrainian]. URL: http://www.bank.gov.ua/control/curmetal/detail/currency?period=daily (date accessed: 15.10.2017).

26. Forma poshuku za period // NBU [electronic database in Ukrainian]. URL: https://bank.gov.ua/control/uk/curmetal/currency/search/form/period (date accessed: 15.10.2017).